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SESSION RESUMED IN FILE 'MEDLINE, BIOSIS, EMBASE, SCISEARCH, WPIDS'
AT 13:28:37 ON 31 MAY 2004
FILE 'MEDLINE' ENTERED AT 13:28:37 ON 31 MAY 2004
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FILE 'WPIDS' ENTERED AT 13:28:37 ON 31 MAY 2004
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                     259.97     376.66

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     (FILE 'HOME' ENTERED AT 11:33:32 ON 31 MAY 2004)

     FILE 'MEDLINE, BIOSIS, EMBASE, SCISEARCH, WPIDS' ENTERED AT 11:33:56 ON
     31 MAY 2004
L1          1719 S MULTIVALEN? (S) ?LIGAND?
L2         30086 S ?VALEN? (S) ?LIGAND?
L3           230 S L2 AND IN(W)VIVO
L4            83 S L2 AND EX(W)VIVO
L5           185 DUP REM L3 (45 DUPLICATES REMOVED)

     FILE 'STNGUIDE' ENTERED AT 12:03:54 ON 31 MAY 2004

     FILE 'MEDLINE, EMBASE, SCISEARCH' ENTERED AT 12:05:09 ON 31 MAY 2004

     FILE 'STNGUIDE' ENTERED AT 12:05:10 ON 31 MAY 2004

     FILE 'MEDLINE, BIOSIS, EMBASE, SCISEARCH, WPIDS' ENTERED AT 12:10:07 ON
     31 MAY 2004
L6            57 DUP REM L4 (26 DUPLICATES REMOVED)
L7             5 S L6 AND SIGNAL
L8            52 S L6 NOT L7

=> s l2 and romp
L9            34 L2 AND ROMP

=> dup rem
ENTER L# LIST OR (END):l9
PROCESSING COMPLETED FOR L9
L10           21 DUP REM L9 (13 DUPLICATES REMOVED)

=> d scan l10 1-21
DISPLAY FORMATS NOT ALLOWED WITH SCAN IN A MULTIFILE ENVIRONMENT
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=> d ti l10

L10 ANSWER 1 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
TI Synthesizing alternating copolymer via sequential olefin metathesis reactions, used in e.g. biomedical industry by synthesizing polyolefin intermediate using ring-opening metathesis polymerization reaction and contacting with diene monomer.

=> d ti l10 2-21

L10 ANSWER 2 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
TI Increased polymer length of oligopeptide-substituted polynorbornenes with LiCl

L10 ANSWER 3 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
TI New metathesis oligomer for use as antifog agents, comprises alkoxy ether group attached to oligomer moiety.

L10 ANSWER 4 OF 21 MEDLINE on STN DUPLICATE 1
TI Synthesis and applications of end-labeled neoglycopolymers.

L10 ANSWER 5 OF 21 MEDLINE on STN DUPLICATE 2
TI Synthesis of a multivalent display of a CD22-binding trisaccharide.

L10 ANSWER 6 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
TI **ROMP**-polymers, in asymmetric catalysis: The role of the polymer backbone

L10 ANSWER 7 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
TI A series of ruthenium(II) complexes containing the bulky, functionalized trialkylphosphines tBu(2)PCH(2)XC(6)H(5) as ligands

L10 ANSWER 8 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
TI Ring-opening metathesis polymerization by tungsten complexes with O,S,O- or O,N,O-tridentate chelating ligands

L10 ANSWER 9 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
TI Cell aggregation by scaffolded receptor clusters

L10 ANSWER 10 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
TI Synthesis of novel oxo complexes of tungsten and molybdenum with various chalcogen-bridged chelating bis(aryloxo) ligands and their catalytic behavior for ring-opening metathesis polymerization

L10 ANSWER 11 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
TI **Multivalent ligands**, useful for creating scaffolds of biological species, including antigens, epitopes, **ligand** binding groups, cell receptors and macromolecules.

L10 ANSWER 12 OF 21 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI The chemistry and biology of multivalent saccharide displays.

L10 ANSWER 13 OF 21 MEDLINE on STN DUPLICATE 3
TI Inhibition of cell adhesion to fibronectin by oligopeptide-substituted polynorbornenes.

L10 ANSWER 14 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
TI Preparing telechelic polymer, useful in crosslinked plastics synthesis or as ligands for cell surface receptors, comprises polymerizing monomer in presence of ruthenium or osmium carbene catalyst followed by reaction with capping agent.

L10 ANSWER 15 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

TI New cationic complex ruthenium or osmium catalysts useful for metathesis of olefins.

L10 ANSWER 16 OF 21 MEDLINE on STN DUPLICATE 4
TI Synthesis of end-labeled **multivalent ligands** for exploring cell-surface-receptor-**ligand** interactions.

L10 ANSWER 17 OF 21 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 5
TI Probing low affinity and **multivalent** interactions with surface plasmon resonance: **Ligands** for concanavalin A.

L10 ANSWER 18 OF 21 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 6
TI Dipyridyl amide-functionalized polymers prepared by ring-opening-metathesis polymerization (**ROMP**) for the selective extraction of mercury and palladium.

L10 ANSWER 19 OF 21 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 7
TI Neoglycopolymer inhibitors of the selectins.

L10 ANSWER 20 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
TI In situ catalyst systems for ring-opening metathesis polymerization

L10 ANSWER 21 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
TI New polyglycomer cpds. having sulphated saccharide moieties - are used for topical treatment of inflammation.

=> d bib l10 1-21

L10 ANSWER 1 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-803754 [75] WPIDS
DNC C2003-221765
TI Synthesizing alternating copolymer via sequential olefin metathesis reactions, used in e.g. biomedical industry by synthesizing polyolefin intermediate using ring-opening metathesis polymerization reaction and contacting with diene monomer.
DC A17 A92 A96 B07 E13 E15
IN CHOI, T; GRUBBS, R H; KIM, H M; LEE, C W; RUTENBERG, I M
PA (CHOI-I) CHOI T; (GRUB-I) GRUBBS R H; (KIMH-I) KIM H M; (LEEC-I) LEE C W; (RUTE-I) RUTENBERG I M; (CALY) CALIFORNIA INST OF TECHNOLOGY
CYC 102
PI WO 2003070779 A1 20030828 (200375)* EN 94
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
US 2003236367 A1 20031225 (200408)
US 2003236377 A1 20031225 (200408)
AU 2003216352 A1 20030909 (200427)
ADT WO 2003070779 A1 WO 2003-US5207 20030219; US 2003236367 A1 Provisional US 2002-359055P 20020219, US 2003-371196 20030219; US 2003236377 A1 Provisional US 2002-359055P 20020219, US 2003-371195 20030219; AU 2003216352 A1 AU 2003-216352 20030219
FDT AU 2003216352 A1 Based on WO 2003070779
PRAI US 2002-359055P 20020219; US 2003-371196 20030219; US 2003-371195 20030219

L10 ANSWER 2 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN

AN 2003:218681 SCISEARCH
GA The Genuine Article (R) Number: 651PV
TI Increased polymer length of oligopeptide-substituted polynorbornenes with LiCl
AU Roberts K S; Sampson N S (Reprint)
CS SUNY Stony Brook, Dept Chem, Stony Brook, NY 11794 USA (Reprint)
CYA USA
SO JOURNAL OF ORGANIC CHEMISTRY, (7 MAR 2003) Vol. 68, No. 5, pp. 2020-2023. Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA. ISSN: 0022-3263.
DT Article; Journal
LA English
REC Reference Count: 15
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L10 ANSWER 3 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-069183 [07] WPIDS
DNC C2003-018151
TI New metathesis oligomer for use as antifog agents, comprises alkoxy ether group attached to oligomer moiety.
DC A17 A97 E11 P13
IN PICCINELLI, P; VITALI, M; ZEDDA, A
PA (CIBA) CIBA SPECIALTY CHEM HOLDING INC; (CIBA) CIBA SPECIALTY CHEM SPA; (PICC-I) PICCINELLI P; (VITA-I) VITALI M; (ZEDD-I) ZEDDA A
CYC 32
PI EP 1241196 A2 20020918 (200307)* EN 25
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
CA 2375340 A1 20020912 (200307) EN
US 2002185630 A1 20021212 (200307)
JP 2002348360 A 20021204 (200310) 23
KR 2002072795 A 20020918 (200311)
CN 1375485 A 20021023 (200313)
MX 2002002378 A1 20021001 (200373)
ADT EP 1241196 A2 EP 2002-405166 20020305; CA 2375340 A1 CA 2002-2375340 20020308; US 2002185630 A1 US 2002-93983 20020308; JP 2002348360 A JP 2002-66945 20020312; KR 2002072795 A KR 2002-12909 20020311; CN 1375485 A CN 2002-107301 20020311; MX 2002002378 A1 MX 2002-2378 20020305
PRAI EP 2001-810246 20010312

L10 ANSWER 4 OF 21 MEDLINE on STN DUPLICATE 1
AN 2002355203 MEDLINE
DN PubMed ID: 12098230
TI Synthesis and applications of end-labeled neoglycopolymers.
AU Owen Robert M; Gestwicki Jason E; Young Travis; Kiessling Laura L
CS Department of Chemistry, University of Wisconsin-Madison, Madison, Wisconsin 53706, USA.
NC GM 55984 (NIGMS)
GM08349 (NIGMS)
RR08389 (NCRR)
SO Organic letters, (2002 Jul 11) 4 (14) 2293-6.
Journal code: 100890393. ISSN: 1523-7060.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200208
ED Entered STN: 20020707
Last Updated on STN: 20020829
Entered Medline: 20020827

L10 ANSWER 5 OF 21 MEDLINE on STN DUPLICATE 2
AN 2002663545 MEDLINE
DN PubMed ID: 12423961

TI Synthesis of a multivalent display of a CD22-binding trisaccharide.
AU Yang Zhi-Qiang; Puffer Erik B; Pontrello Jason K; Kiessling Laura L
CS Department of Chemistry, University of Wisconsin-Madison, Madison, WI 53706, USA.
NC GM49975 (NIGMS)
RR08389 (NCRR)
SO Carbohydrate research, (2002 Oct 8) 337 (18) 1605-13.
Journal code: 0043535. ISSN: 0008-6215.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200304
ED Entered STN: 20021109
Last Updated on STN: 20030423
Entered Medline: 20030422

L10 ANSWER 6 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:720489 SCISEARCH
GA The Genuine Article (R) Number: 586RB
TI **ROMP**-polymers, in asymmetric catalysis: The role of the polymer backbone
AU Bolm C (Reprint); Tanyeli C; Grenz A; Dinter C L
CS Rhein Westfal TH Aachen, Inst Organ Chem, Prof Pirlet Str 1, D-52056 Aachen, Germany (Reprint); Rhein Westfal TH Aachen, Inst Organ Chem, D-52056 Aachen, Germany; Middle E Tech Univ, Dept Chem, TR-06531 Ankara, Turkey
CYA Germany; Turkey
SO ADVANCED SYNTHESIS & CATALYSIS, (AUG 2002) Vol. 344, No. 6-7, pp. 649-656.
Publisher: WILEY-V C H VERLAG GMBH, PO BOX 10 11 61, D-69451 WEINHEIM, GERMANY.
ISSN: 1615-4150.
DT Article; Journal
LA English
REC Reference Count: 80
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L10 ANSWER 7 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:94932 SCISEARCH
GA The Genuine Article (R) Number: 515CD
TI A series of ruthenium(II) complexes containing the bulky, functionalized trialkylphosphines tBu(2)PCH(2)XC(6)H(5) as ligands
AU Jung S; Ilg K; Brandt C D; Wolf J; Werner H (Reprint)
CS Univ Wurzburg, Inst Anorgan Chem, D-97074 Wurzburg, Germany (Reprint)
CYA Germany
SO JOURNAL OF THE CHEMICAL SOCIETY-DALTON TRANSACTIONS, (DEC 2002) No. 3, pp. 318-327.
Publisher: ROYAL SOC CHEMISTRY, THOMAS GRAHAM HOUSE, SCIENCE PARK, MILTON RD,, CAMBRIDGE CB4 0WF, CAMBS, ENGLAND.
ISSN: 1472-7773.
DT Article; Journal
LA English
REC Reference Count: 71
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L10 ANSWER 8 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:555231 SCISEARCH
GA The Genuine Article (R) Number: 568CV
TI Ring-opening metathesis polymerization by tungsten complexes with O,S,O- or O,N,O-tridentate chelating ligands
AU Takashima Y (Reprint); Nakayama Y; Yasuda H; Nakamura A; Harada A
CS Osaka Univ, Grad Sch Sci, Dept Macromol Sci, Toyonaka, Osaka 5600043, Japan (Reprint); Hiroshima Univ, Grad Sch Engn, Dept Chem Mat, Higashihiroshima 7398527, Japan; OM Res, Kita Ku, Osaka 5300052, Japan

CYA Japan
SO KOBUNSHI RONBUNSHU, (JUL 2002) Vol. 59, No. 6, pp. 298-308.
Publisher: SOC POLYMER SCIENCE JAPAN, TSUKIJI DAISAN NAGAOKA BLDG, 2-4-2 TSUKIJI, CHUO-KU, TOKYO, 104, JAPAN.
ISSN: 0386-2186.
DT Article; Journal
LA Japanese
REC Reference Count: 48
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L10 ANSWER 9 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:198240 SCISEARCH
GA The Genuine Article (R) Number: 525WZ
TI Cell aggregation by scaffolded receptor clusters
AU Gestwicki J E; Strong L E; Cairo C W; Boehm F J; Kiessling L L (Reprint)
CS Univ Wisconsin, Dept Chem, 1101 Univ Ave, Madison, WI 53706 USA (Reprint); Univ Wisconsin, Dept Chem, Madison, WI 53706 USA; Univ Wisconsin, Dept Biochem, Madison, WI 53706 USA
CYA USA
SO CHEMISTRY & BIOLOGY, (FEB 2002) Vol. 9, No. 2, pp. 163-169.
Publisher: CURRENT BIOLOGY LTD, 84 THEOBALDS RD, LONDON WC1X 8RR, ENGLAND.
ISSN: 1074-5521.
DT Article; Journal
LA English
REC Reference Count: 53
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L10 ANSWER 10 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:495198 SCISEARCH
GA The Genuine Article (R) Number: 559WL
TI Synthesis of novel oxo complexes of tungsten and molybdenum with various chalcogen-bridged chelating bis(aryloxo) ligands and their catalytic behavior for ring-opening metathesis polymerization
AU Takashima Y; Nakayama Y; Yasuda H; Harada A (Reprint)
CS Osaka Univ, Grad Sch Sci, Dept Macromol Sci, Toyonaka, Osaka 5600043, Japan (Reprint); Hiroshima Univ, Grad Sch Engn, Dept Chem Mat, Higashihiroshima 7398527, Japan
CYA Japan
SO JOURNAL OF ORGANOMETALLIC CHEMISTRY, (15 MAY 2002) Vol. 651, No. 1-2, pp. 114-123.
Publisher: ELSEVIER SCIENCE SA, PO BOX 564, 1001 LAUSANNE, SWITZERLAND.
ISSN: 0022-328X.
DT Article; Journal
LA English
REC Reference Count: 44
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L10 ANSWER 11 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-648402 [74] WPIDS
DNN N2001-484491 DNC C2001-191334
TI **Multivalent ligands**, useful for creating scaffolds of biological species, including antigens, epitopes, **ligand** binding groups, cell receptors and macromolecules.
DC B04 B05 S03
IN GESTWICKI, J E; KIESSLING, L L; STRONG, L E
PA (WISC) WISCONSIN ALUMNI RES FOUND
CYC 95
PI WO 2001071309 A2 20010927 (200174)* EN 95
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2001081499 A 20011003 (200210)
US 2003125262 A1 20030703 (200345)
EP 1334118 A2 20030813 (200355) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
JP 2004512258 W 20040422 (200428) 163
ADT WO 2001071309 A2 WO 2001-US9174 20010321; AU 2001081499 A AU 2001-81499 20010321; US 2003125262 A1 Provisional US 2000-191014P 20000321, US 2001-815296 20010321; EP 1334118 A2 EP 2001-959934 20010321, WO 2001-US9174 20010321; JP 2004512258 W JP 2001-569247 20010321, WO 2001-US9174 20010321
FDT AU 2001081499 A Based on WO 2001071309; EP 1334118 A2 Based on WO 2001071309; JP 2004512258 W Based on WO 2001071309
PRAI US 2000-191014P 20000321; US 2001-815296 20010321

L10 ANSWER 12 OF 21 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:101280 BIOSIS
DN PREV200300101280
TI The chemistry and biology of multivalent saccharide displays.
AU Mann, David A. [Reprint Author]; Kiessling, Laura L. [Reprint Author]
CS University of Wisconsin-Madison, Madison, WI, USA
SO Wang, Peng George [Editor, Reprint Author]; Bertozzi, Carolyn R. [Editor]. (2001) pp. 221-275. Glycochemistry: Principles, synthesis, and applications. print.
Publisher: Marcel Dekker AG, Hutgasse 4, CH-4001, Postfach 812, Basel, Switzerland; Marcel Dekker Inc., 270 Madison Avenue, New York, NY, 10016, USA.
ISBN: 0-8247-0538-6 (cloth).
DT Book; (Book Chapter)
LA English
ED Entered STN: 19 Feb 2003
Last Updated on STN: 4 Apr 2003

L10 ANSWER 13 OF 21 MEDLINE on STN DUPLICATE 3
AN 2001404374 MEDLINE
DN PubMed ID: 11456698
TI Inhibition of cell adhesion to fibronectin by oligopeptide-substituted polynorbornenes.
AU Maynard H D; Okada S Y; Grubbs R H
CS Arnold and Mabel Beckman Laboratories of Chemical Synthesis, Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, California 91125, USA.
SO Journal of the American Chemical Society, (2001 Feb 21) 123 (7) 1275-9.
Journal code: 7503056. ISSN: 0002-7863.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200109
ED Entered STN: 20010917
Last Updated on STN: 20010917
Entered Medline: 20010913

L10 ANSWER 14 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-168291 [17] WPIDS
DNC C2001-050161
TI Preparing telechelic polymer, useful in crosslinked plastics synthesis or as ligands for cell surface receptors, comprises polymerizing monomer in presence of ruthenium or osmium carbene catalyst followed by reaction with capping agent.
DC A17 A96 B04 D16 E19
IN KIESSLING, L L; STRONG, L E; GORDON, E J
PA (WISC) WISCONSIN ALUMNI RES FOUND; (KIES-I) KIESSLING L L; (STRO-I) STRONG L E

CYC 94
PI WO 2000078821 A1 20001228 (200117)* EN 62
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK
LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000066484 A 20010109 (200122)
US 6271315 B1 20010807 (200147)
US 6291616 B1 20010918 (200157)
US 2002007016 A1 20020117 (200212)
EP 1200484 A1 20020502 (200236) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
KR 2002013585 A 20020220 (200257)
JP 2003502488 W 20030121 (200308) 98
US 6538072 B2 20030325 (200325)
MX 2001012960 A1 20020801 (200367)
ADT WO 2000078821 A1 WO 2000-US40245 20000619; AU 2000066484 A AU 2000-66484 20000619; US 6271315 B1 US 1999-335430 19990617; US 6291616 B1 US 1999-336121 19990617; US 2002007016 A1 Div ex US 1999-335430 19990617, US 2001-888098 20010622; EP 1200484 A1 EP 2000-954149 20000619, WO 2000-US40245 20000619; KR 2002013585 A KR 2001-716230 20011217; JP 2003502488 W WO 2000-US40245 20000619, JP 2001-505578 20000619; US 6538072 B2 Div ex US 1999-335430 19990617, US 2001-888098 20010622; MX 2001012960 A1 WO 2000-US40245 20000619, MX 2001-12960 20011214
FDT AU 2000066484 A Based on WO 2000078821; US 2002007016 A1 Div ex US 6271315; EP 1200484 A1 Based on WO 2000078821; JP 2003502488 W Based on WO 2000078821; US 6538072 B2 Div ex US 6271315; MX 2001012960 A1 Based on WO 2000078821
PRAI US 1999-336121 19990617; US 1999-335430 19990617;
US 2001-888098 20010622

L10 ANSWER 15 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2000-666416 [65] WPIDS
DNC C2000-201989
TI New cationic complex ruthenium or osmium catalysts useful for metathesis of olefins.
DC A18 E11 E12
IN KYLLINGSTAD, V L; MUKERJEE, S L
PA (JAPG) ZEON CHEM LP; (JAPG) NIPPON ZEON KK
CYC 28
PI EP 1041078 A2 20001004 (200065)* EN 20
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
CA 2302652 A1 20001002 (200065) EN
JP 2000309597 A 20001107 (200106) 14
US 6225488 B1 20010501 (200126)
ADT EP 1041078 A2 EP 2000-106026 20000328; CA 2302652 A1 CA 2000-2302652 20000328; JP 2000309597 A JP 2000-95138 20000330; US 6225488 B1 US 1999-285250 19990402
PRAI US 1999-285250 19990402

L10 ANSWER 16 OF 21 MEDLINE on STN DUPLICATE 4
AN 2000130934 MEDLINE
DN PubMed ID: 10662681
TI Synthesis of end-labeled **multivalent ligands** for exploring cell-surface-receptor-**ligand** interactions.
AU Gordon E J; Gestwicki J E; Strong L E; Kiessling L L
CS Departments of Chemistry and Biochemistry, University of Wisconsin-Madison, Madison, WI 53706, USA.
NC GM18750 (NIGMS)
GM55984 (NIGMS)

T32GM08349 (NIGMS)
SO Chemistry & biology, (2000 Jan) 7 (1) 9-16.
Journal code: 9500160. ISSN: 1074-5521.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000327
Last Updated on STN: 20000327
Entered Medline: 20000313

L10 ANSWER 17 OF 21 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 5
AN 1998369028 EMBASE
TI Probing low affinity and **multivalent** interactions with surface plasmon resonance: **Ligands** for concanavalin A.
AU Mann D.A.; Kanai M.; Maly D.J.; Kiessling L.L.
CS L.L. Kiessling, Department of Chemistry, University of Wisconsin, Madison, WI 53706, United States
SO Journal of the American Chemical Society, (21 Oct 1998) 120/41 (10575-10582).
ISSN: 0002-7863 CODEN: JACSAT
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English

L10 ANSWER 18 OF 21 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 6
AN 1998140055 EMBASE
TI Dipyridyl amide-functionalized polymers prepared by ring-opening-metathesis polymerization (**ROMP**) for the selective extraction of mercury and palladium.
AU Sinner F.; Buchmeiser M.R.; Tessadri R.; Mupa M.; Wurst K.; Bonn G.K.
CS M.R. Buchmeiser, Inst. Analytische Chemie/Radiochemie, Universitat Innsbruck, Inrain 52 a, A-6020 Innsbruck, Austria.
michael.r.buchmeiser@uibk.ac.at
SO Journal of the American Chemical Society, (1 Apr 1998) 120/12 (2790-2797).
ISSN: 0002-7863 CODEN: JACSAT
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English

L10 ANSWER 19 OF 21 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 7
AN 1997:433766 BIOSIS
DN PREV199799732969
TI Neoglycopolymer inhibitors of the selectins.
AU Manning, David D.; Strong, Laura E.; Hu, Xin; Beck, Pamela J.; Kiessling, Laura L. [Reprint author]
CS Dep. Chem., Univ. Wis.-Madison, Madison, WI 53706, USA
SO Tetrahedron, (1997) Vol. 53, No. 35, pp. 11937-11952.
CODEN: TETRAB. ISSN: 0040-4020.
DT Article
LA English
ED Entered STN: 8 Oct 1997
Last Updated on STN: 8 Oct 1997

L10 ANSWER 20 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 97:725481 SCISEARCH

GA The Genuine Article (R) Number: XX841
TI In situ catalyst systems for ring-opening metathesis polymerization
AU Kelsey D R (Reprint); Handlin D L; Narayana M; Scardino B M
CS SHELL DEV CO, WESTHOLLOW TECHNOL CTR, POB 1380, HOUSTON, TX 77251 (Reprint)
CYA USA
SO JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY, (OCT 1997) Vol. 35, No. 14, pp. 3027-3047.
Publisher: JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK, NY 10158-0012.
ISSN: 0887-624X.
DT General Review; Journal
FS PHYS
LA English
REC Reference Count: 156
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L10 ANSWER 21 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1996-321822 [32] WPIDS
DNC C1996-102517
TI New polyglycomer cpds. having sulphated saccharide moieties - are used for topical treatment of inflammation.
DC A96 B04
IN KIESSLING, L L; MANNING, D D; MORTELL, K H
PA (WISC) WISCONSIN ALUMNI RES FOUND; (KIES-I) KIESSLING L L; (MANN-I) MANNING D D; (MORT-I) MORTELL K H
CYC 64
PI WO 9620236 A1 19960704 (199632)* EN 50
RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ UG
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TT UA UG US UZ VN
AU 9641315 A 19960719 (199647)
US 5587442 A 19961224 (199706) 12
ADT WO 9620236 A1 WO 1995-US13361 19951013; AU 9641315 A AU 1996-41315 19951013; US 5587442 A US 1994-363503 19941223
FDT AU 9641315 A Based on WO 9620236
PRAI US 1994-363503 19941223

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: May 28, 2004 (20040528/UP).

=> d bib abs l10 1-21
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CONTINUE? (Y)/N:y

L10 ANSWER 1 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-803754 [75] WPIDS
DNC C2003-221765
TI Synthesizing alternating copolymer via sequential olefin metathesis reactions, used in e.g. biomedical industry by synthesizing polyolefin intermediate using ring-opening metathesis polymerization reaction and

contacting with diene monomer.

DC A17 A92 A96 B07 E13 E15

IN CHOI, T; GRUBBS, R H; KIM, H M; LEE, C W; RUTENBERG, I M

PA (CHOI-I) CHOI T; (GRUB-I) GRUBBS R H; (KIMH-I) KIM H M; (LEEC-I) LEE C W; (RUTE-I) RUTENBERG I M; (CALY) CALIFORNIA INST OF TECHNOLOGY

CYC 102

PI WO 2003070779 A1 20030828 (200375)* EN 94
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
US 2003236367 A1 20031225 (200408)
US 2003236377 A1 20031225 (200408)
AU 2003216352 A1 20030909 (200427)

ADT WO 2003070779 A1 WO 2003-US5207 20030219; US 2003236367 A1 Provisional US 2002-359055P 20020219, US 2003-371196 20030219; US 2003236377 A1 Provisional US 2002-359055P 20020219, US 2003-371195 20030219; AU 2003216352 A1 AU 2003-216352 20030219

FDT AU 2003216352 A1 Based on WO 2003070779

PRAI US 2002-359055P 20020219; US 2003-371196 20030219; US 2003-371195 20030219

AN 2003-803754 [75] WPIDS

AB WO2003070779 A UPAB: 20031120

NOVELTY - Synthesizing alternating copolymer via sequential olefin metathesis reactions by:

(1) synthesizing a polyolefin intermediate using a ring-opening metathesis polymerization (**ROMP**) reaction by contacting a cyclic olefin monomer with an olefin metathesis catalyst; and

(2) contacting with a diene monomer having two terminal olefinic groups.

DETAILED DESCRIPTION - Synthesizing an alternating copolymer via sequential olefin metathesis reactions comprises:

(1) synthesizing a polyolefin intermediate using a ring-opening metathesis polymerization (**ROMP**) reaction by contacting a cyclic olefin monomer with an olefin metathesis catalyst under reaction conditions to allow the **ROMP** reaction to occur; and

(2) contacting the polyolefin intermediate with a diene monomer having two terminal olefinic groups under reaction conditions to effect metathesis insertion of the diene monomer into the backbone of the polyolefin intermediate.

INDEPENDENT CLAIMS are also included for:

(1) synthesizing a copolymer via an olefin metathesis insertion reaction comprising contacting a polyolefin with a 1:1 diene monomer having two terminal olefinic groups in the presence of an olefin metathesis catalyst, where the concentration of the diene in the reaction medium is 0.2-2 molar; and

(2) synthesizing a macromolecule by ring expansion of a cyclic olefin comprising:

(a) a ring-opening metathesis (ROM) reaction of the cyclic olefin;

(b) a cross metathesis (CM) step reaction with a diene having 2 terminal olefinic groups; and

(c) a ring closure metathesis (RCM) reaction, where the steps are carried out in the presence of an olefin metathesis catalyst.

USE - The method is used for synthesizing an alternating copolymer via sequential olefin metathesis reactions (claimed), useful in the pharmaceutical, biomedical, organic synthesis, chemical and packaging industries.

ADVANTAGE - The method permits producing derivatives from the regioregular polymers by direct insertion of monomer units into the polymer backbone.

Dwg.0/1

L10 ANSWER 2 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2003:218681 SCISEARCH
GA The Genuine Article (R) Number: 651PV
TI Increased polymer length of oligopeptide-substituted polynorbornenes with LiCl
AU Roberts K S; Sampson N S (Reprint)
CS SUNY Stony Brook, Dept Chem, Stony Brook, NY 11794 USA (Reprint)
CYA USA
SO JOURNAL OF ORGANIC CHEMISTRY, (7 MAR 2003) Vol. 68, No. 5, pp. 2020-2023. Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA. ISSN: 0022-3263.
DT Article; Journal
LA English
REC Reference Count: 15
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB The ring-opening metathesis polymerization (**ROMP**) reaction is extraordinarily useful for the preparation of a large variety of polymers. We report that the length (n = 25-50) of high-substituent-density oligopeptide polymers synthesized by **ROMP** is dramatically improved upon addition of LiCl to reduce polymer and oligopeptide aggregation. This methodology should significantly expand the variety of polymers that may be prepared by **ROMP** and be of general use with norbornyl oligopeptides of any sequence.

L10 ANSWER 3 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-069183 [07] WPIDS
DNC C2003-018151
TI New metathesis oligomer for use as antifog agents, comprises alkoxy ether group attached to oligomer moiety.
DC A17 A97 E11 P13
IN PICCINELLI, P; VITALI, M; ZEDDA, A
PA (CIBA) CIBA SPECIALTY CHEM HOLDING INC; (CIBA) CIBA SPECIALTY CHEM SPA; (PICC-I) PICCINELLI P; (VITA-I) VITALI M; (ZEDD-I) ZEDDA A
CYC 32
PI EP 1241196 A2 20020918 (200307)* EN 25
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
CA 2375340 A1 20020912 (200307) EN
US 2002185630 A1 20021212 (200307)
JP 2002348360 A 20021204 (200310) 23
KR 2002072795 A 20020918 (200311)
CN 1375485 A 20021023 (200313)
MX 2002002378 A1 20021001 (200373)
ADT EP 1241196 A2 EP 2002-405166 20020305; CA 2375340 A1 CA 2002-2375340 20020308; US 2002185630 A1 US 2002-93983 20020308; JP 2002348360 A JP 2002-66945 20020312; KR 2002072795 A KR 2002-12909 20020311; CN 1375485 A CN 2002-107301 20020311; MX 2002002378 A1 MX 2002-2378 20020305
PRAI EP 2001-810246 20010312
AN 2003-069183 [07] WPIDS
AB EP 1241196 A UPAB: 20030129
NOVELTY - A metathesis oligomer (I) comprising alkoxy ether group attached to oligomer moiety is new.
DETAILED DESCRIPTION - A metathesis oligomer of formula (I) is new:
(A-(X-(Y-Z)p)mX'(Y'-Z'-)q)nB-Z'') (I)
A, B = chain terminal groups from the chain transfer agent A-B;
X, X' = unsaturated or hydrogenated repeating units from cycloolefins polymerized by metathesis;
Y, Y' = bivalent groups; and
Z, Z', Z'' = alkoxy ether e.g. hydroxy-(2-5C)alkoxy, dihydroxy-(3-7C)alkoxy, hydroxy-(2-3C)alkoxy-poly-(2-3C)alkoxy and (1-4C)alkoxy-poly-(2-3C)alkoxy, or alkoxy ether, such as dihydroxy-(3-7C)alkoxy and dihydroxy-(2-3C)alkoxy-poly-(2-3C)alkoxy, in which the hydroxy is esterified by another group.

A-B represent chain terminal groups from the chain transfer agent A-B and X represents unsaturated or hydrogenated repeating units from cycloolefins polymerized by metathesis.

One of m and n is zero or greater than one, and the other is greater than one, provided that the sum of m and n is at least two.

Integers p and q independently represents zero, greater than one, and the other one is greater than one.

INDEPENDENT CLAIMS are also included for:

(a) a polymerizable composition comprising a penta- or hexavalent ruthenium or osmium carbene catalyst capable of performing ring opening metathesis polymerization of cycloolefins, and the chain transfer agent A-B and monomers capable of forming compound (I); and

(b) a method for increasing the antifog properties of polymers comprising incorporating the inventive compound (I) within film polymer material.

USE - As polymer antifog agents and for greenhouses and food packaging applications (claimed).

ADVANTAGE - The efficiency of polymer films and foils to resist fogging is increased if oligomers obtained by **ROMP** containing surface-active alkoxy ether are added to the polymers. The polymer films incorporating the metathesis oligomer (I) resist fogging when they are exposed for a longer period of time to conditions of higher temperatures and humidity.

Dwg.0/0

L10 ANSWER 4 OF 21 MEDLINE on STN DUPLICATE 1
AN 2002355203 MEDLINE
DN PubMed ID: 12098230
TI Synthesis and applications of end-labeled neoglycopolymers.
AU Owen Robert M; Gestwicki Jason E; Young Travis; Kiessling Laura L
CS Department of Chemistry, University of Wisconsin-Madison, Madison, Wisconsin 53706, USA.
NC GM 55984 (NIGMS)
GM08349 (NIGMS)
RR08389 (NCRR)
SO Organic letters, (2002 Jul 11) 4 (14) 2293-6.
Journal code: 100890393. ISSN: 1523-7060.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200208
ED Entered STN: 20020707
Last Updated on STN: 20020829
Entered Medline: 20020827
AB [reaction: see text] Neoglycopolymers that vary in length and contain a single fluorescent reporter group were synthesized using ring-opening metathesis polymerization (**ROMP**). The utility of these materials is demonstrated by the development of a cellular binding assay for L-selectin, a cell surface protein that plays a role in inflammation. The data reveal that these **multivalent ligands** interact with multiple copies of L-selectin.

L10 ANSWER 5 OF 21 MEDLINE on STN DUPLICATE 2
AN 2002663545 MEDLINE
DN PubMed ID: 12423961
TI Synthesis of a multivalent display of a CD22-binding trisaccharide.
AU Yang Zhi-Qiang; Puffer Erik B; Pontrello Jason K; Kiessling Laura L
CS Department of Chemistry, University of Wisconsin-Madison, Madison, WI 53706, USA.
NC GM49975 (NIGMS)
RR08389 (NCRR)
SO Carbohydrate research, (2002 Oct 8) 337 (18) 1605-13.
Journal code: 0043535. ISSN: 0008-6215.

CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200304
ED Entered STN: 20021109
Last Updated on STN: 20030423
Entered Medline: 20030422
AB **Multivalent** interactions have been implicated in the binding of B-cell surface glycoprotein CD22 to its physiological **ligands**. Because CD22 can influence B-cell antigen receptor (BCR) signaling, **multivalent ligands** that cluster CD22 may influence B-cell responses. Here, we report an efficient synthesis of a fluorophore-labeled multivalent display of a CD22-binding trisaccharide, Neu5Acalpha2,6Galbeta1,4Glc, using the ring-opening metathesis polymerization (**ROMP**). Our synthetic strategy involves the modification of an N-hydroxysuccinimide (NHS) ester-substituted polymer generated by **ROMP** with the aminopropyl glycoside of the trisaccharide. The conjugation efficiency for the coupling is high; when 0.3 equiv of the trisaccharide derivative were used relative to NHS ester groups, the mole fraction (chi) of trisaccharide ligand incorporated onto the backbone was 0.3. A fluorescein-labeled version of the **multivalent ligand** binds to cells expressing CD22.

L10 ANSWER 6 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:720489 SCISEARCH
GA The Genuine Article (R) Number: 586RB
TI **ROMP**-polymers, in asymmetric catalysis: The role of the polymer backbone
AU Bolm C (Reprint); Tanyeli C; Grenz A; Dinter C L
CS Rhein Westfal TH Aachen, Inst Organ Chem, Prof Pirlet Str 1, D-52056 Aachen, Germany (Reprint); Rhein Westfal TH Aachen, Inst Organ Chem, D-52056 Aachen, Germany; Middle E Tech Univ, Dept Chem, TR-06531 Ankara, Turkey
CYA Germany; Turkey
SO ADVANCED SYNTHESIS & CATALYSIS, (AUG 2002) Vol. 344, No. 6-7, pp. 649-656. Publisher: WILEY-V C H VERLAG GMBH, PO BOX 10 11 61, D-69451 WEINHEIM, GERMANY.
ISSN: 1615-4150.
DT Article; Journal
LA English
REC Reference Count: 80
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Ring-opening metathesis polymerization (**ROMP**) is utilized for the synthesis of highly functionalized polymers with **covalently** bound chiral prolinol units. The linear macromolecules act as multifunctional **ligands** in homogeneous asymmetric catalysis. The solubility of the polymers and their catalytic performance can be tuned by random copolymerization with achiral units in a simple and flexible manner. Use of norbornenes with additional well-defined stereogenic centers in the polymerizable core of the monomers leads to polymers which show cooperative effects between the various elements of chirality during the course of the catalysis.

L10 ANSWER 7 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:94932 SCISEARCH
GA The Genuine Article (R) Number: 515CD
TI A series of ruthenium(II) complexes containing the bulky, functionalized trialkylphosphines tBu(2)PCH(2)XC(6)H(5) as ligands
AU Jung S; Ilg K; Brandt C D; Wolf J; Werner H (Reprint)
CS Univ Wurzburg, Inst Anorgan Chem, D-97074 Wurzburg, Germany (Reprint)
CYA Germany
SO JOURNAL OF THE CHEMICAL SOCIETY-DALTON TRANSACTIONS, (DEC 2002) No. 3, pp. 318-327.

Publisher: ROYAL SOC CHEMISTRY, THOMAS GRAHAM HOUSE, SCIENCE PARK, MILTON RD,, CAMBRIDGE CB4 0WF, CAMBS, ENGLAND.
ISSN: 1472-7773.
DT Article; Journal
LA English
REC Reference Count: 71
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB The monomeric ruthenium(II) complexes [(eta(6)-C6H5XCH2PtBu2-kappa-P)RuCl2] 3, 4 were prepared either on a reductive route from RuCl3.3H(2)O and tBu(2)PCH(2)XPh (X = CH2 1, OCH2 2) or by **ligand** replacement reactions from [(p-cym)RuCl2](2) and the phosphine via the p-cymene compounds [(p-cym)(C6H5XCH2PtBu2-kappa-P)RuCl2] 6, 7 as intermediates. Abstraction of one chloro **ligand** from 3 with AgPF6 led to the formation of the dinuclear complex [{(eta(6)-C6H5CH2CH2PtBu2-kappa-P)RuCl}(2)](PF6)(2) 8, which reacts with acetone, CH3CN and PMe3 by bridge cleavage to afford the mononuclear compounds [(eta(6)-C6H5CH2CH2PtBu2-kappa-P)RuCl(L)]PF6 9, 10, 12. Both 10 and 11 (the latter containing 2 as chelating **ligand**) were also obtained from 3, 4 and AgPF6 in the presence of acetonitrile. Hydridoruthenium(II) complexes [(eta(6)-C6H5XCH2PtBu2-kappa-P)RuHCl] 13, 14, [RuHCl(H-2)(L)(2)] 15 (L = 1), 16 (L = 2) and [RuHCl(CO)(2)(2)] 17 could be prepared from RuCl3.3H(2)O and 1 or 2 in the presence of NEt3 under reductive conditions. Insertion, substitution and addition reactions of compound 17 led to the formation of [Ru(CH=CH2)Cl(CO)(2)(2)] 18, [RuHF(CO)(2)(2)] 19, and [RuHCl(CO)(2)(2)(2)] 20, respectively. The cationic allenylidene complexes [(eta(6)-C6H5XCH2PtBu2-kappa-P)RuCl(=C=C=CPh2)] A 22a, b (X = CH2; A = BF4, PF6) and 23 (X = OCH2; A = PF6) were prepared from 3, 4 or 13, HC=CC(OH)Ph-2 and either one equivalent of AgPF6 or an **equivalent** amount of HBF4 in diethyl ether. Treatment of 15 and 16 with acetylene afforded the five-coordinate vinylideneruthenium(II) compounds [RuHCl(=C=CH2)(L)(2)] 24, 25 which in the presence of HBF4 are highly efficient catalysts for the Ring Opening Metathesis Polymerization (**ROMP**) of cyclooctene. The molecular structures of 10 and 17 were determined crystallographically.

L10 ANSWER 8 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:555231 SCISEARCH
GA The Genuine Article (R) Number: 568CV
TI Ring-opening metathesis polymerization by tungsten complexes with O,S,O- or O,N,O-tridentate chelating ligands
AU Takashima Y (Reprint); Nakayama Y; Yasuda H; Nakamura A; Harada A
CS Osaka Univ, Grad Sch Sci, Dept Macromol Sci, Toyonaka, Osaka 5600043, Japan (Reprint); Hiroshima Univ, Grad Sch Engn, Dept Chem Mat, Higashihiroshima 7398527, Japan; OM Res, Kita Ku, Osaka 5300052, Japan
CYA Japan
SO KOBUNSHI RONBUNSHU, (JUL 2002) Vol. 59, No. 6, pp. 298-308.
Publisher: SOC POLYMER SCIENCE JAPAN, TSUKIJI DAISAN NAGAOKA BLDG, 2-4-2 TSUKIJI, CHUO-KU, TOKYO, 104, JAPAN.
ISSN: 0386-2186.
DT Article; Journal
LA Japanese
REC Reference Count: 48
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB We have prepared a series of new tungsten complexes with O,S,O- or O,N,O-tridentate chelating **ligands**, which initiate the ring-opening metathesis polymerization (**ROMP**) of norbornene to give polynorbornenes. The tungsten dialkyl complexes bearing diphenylacetylene and O,S,O-tridentate chelating diaryloxo **ligand** , W(eta(2)**PhCequivalent** toCPh)('Bu(2)tbp)(CH2R)(2)('Bu(2)tbp=2,2'-thiobis(4-methyl-6-tert-butylphenoxo); R=SiMe3, Ph, H), gave polynorbornenes with high molecular weight and high cis-content. On the other hand, a catalytic oxotungsten system, WO('Bu(2)tbp)Cl-2/AlEt3, Showed strong dependencies of cis/trans selectivity on the catalyst concentration and on the polymerization temperature. In polymerization of

norbornene by trans-dichloro or dialkyl(oxo)tungsten complexes bearing O,N,O tridentate **ligands**, WOX2[((OCR2CH2)-C-1)((OCR2CH2)-C-2)(NC5H3)](R-1=R-2=Me, X=Cl; R-1=R-2=i-Pr, X=Cl; R-1=Me, R-2=Ph, X=Cl; R-1=R=Me, X=(CHSiMe3)-Si-2)/ AlEt3 or AlCl3 systems, the use of more bulky pyridinediethanolate **ligands** resulted in higher yield of polynorbornenes.

L10 ANSWER 9 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:198240 SCISEARCH
GA The Genuine Article (R) Number: 525WZ
TI Cell aggregation by scaffolded receptor clusters
AU Gestwicki J E; Strong L E; Cairo C W; Boehm F J; Kiessling L L (Reprint)
CS Univ Wisconsin, Dept Chem, 1101 Univ Ave, Madison, WI 53706 USA (Reprint); Univ Wisconsin, Dept Chem, Madison, WI 53706 USA; Univ Wisconsin, Dept Biochem, Madison, WI 53706 USA
CYA USA
SO CHEMISTRY & BIOLOGY, (FEB 2002) Vol. 9, No. 2, pp. 163-169.
Publisher: CURRENT BIOLOGY LTD, 84 THEOBALDS RD, LONDON WC1X 8RR, ENGLAND.
ISSN: 1074-5521.
DT Article; Journal
LA English
REC Reference Count: 53
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB The aggregation of cells by lectins or antibodies is important for biotechnological and therapeutic applications. One strategy to augment the avidity and aggregating properties of these mediators is to maximize the number of their **ligand** binding sites. The **valency** of lectins and antibodies, however, is limited by their quaternary structures. To overcome this limitation, we explored the use of polymers generated by ring-opening metathesis polymerization (**ROMP**) as scaffolds to **noncovalently** assemble multiple copies of a lectin, the **tetravalent** protein concanavalin A (Con A). We demonstrate that complexes between Con A and **multivalent** scaffolds aggregate cells of a T cell leukemia line (Jurkat) more effectively than Con A alone. We anticipate that synthetic scaffolds will offer a new means of facilitating processes that rely on cell aggregation, such as pathogen clearance and immune recognition.

L10 ANSWER 10 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2002:495198 SCISEARCH
GA The Genuine Article (R) Number: 559WL
TI Synthesis of novel oxo complexes of tungsten and molybdenum with various chalcogen-bridged chelating bis(aryloxo) ligands and their catalytic behavior for ring-opening metathesis polymerization
AU Takashima Y; Nakayama Y; Yasuda H; Harada A (Reprint)
CS Osaka Univ, Grad Sch Sci, Dept Macromol Sci, Toyonaka, Osaka 5600043, Japan (Reprint); Hiroshima Univ, Grad Sch Engn, Dept Chem Mat, Higashihiroshima 7398527, Japan
CYA Japan
SO JOURNAL OF ORGANOMETALLIC CHEMISTRY, (15 MAY 2002) Vol. 651, No. 1-2, pp. 114-123.
Publisher: ELSEVIER SCIENCE SA, PO BOX 564, 1001 LAUSANNE, SWITZERLAND.
ISSN: 0022-328X.
DT Article; Journal
LA English
REC Reference Count: 44
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Oxo tungsten complexes coordinated by O-E-O (E = S, Te, CH2) chelating bis(aryloxo) **ligands**, WO[E(4-Me-6-(BuC6H2O)-Bu-t)(2)]Cl-2, (1: E = S, 2: E = Te, 3: E = CH2) were synthesized by the reaction Of WOCl4 with 2,2'-E(4-Me-6-(BuC6H2OH)-Bu-t)(2) [E = S ((t)Bu(2)tbpH(2)), E = Te (TebpH(2)), E = CH2 (mbpH(2))]. Similarly a molybdenum complex, MoO[S(4-Me-6-(BuC6H2O)-Bu-t)(2)]Cl-2 (4), was also prepared. The structures of the oxodichloro tungsten complexes 1 and 3 were determined

by single-crystal X-ray analysis to have pseudo C-s symmetry. A mu-oxo binuclear tungsten complex with two (t)Bu(2)tbp **ligands**, {WO[S(4-Me-6-(BuC6H2O)-Bu-t)2]Cl}(2)(mu-O) (5), was synthesized by refluxing a mixture of W2O3Cl6 and two **equivalents** of (t)Bu(2)tbpH(2) in THF, whose structure was determined by single-crystal X-ray analysis. We study here the catalytic behavior of these complexes for the ring-opening metathesis polymerization (**ROMP**) of norbornene. In the catalytic systems, 1-AlEt3 and 2-AlEt3, cis-trans selectivity varies depending on the catalyst concentration and on the polymerization temperature. The resulting poly(norbornene) tend to have higher cis-content with increasing catalyst concentration and with lowering polymerization temperature. Oppositely, the polymerization under low catalyst concentration and at high polymerization temperature gave the trans-rich poly(norbomene). On the other hand, the complex 3 with the methylene-bridged bis(aryloxo) **ligand** did not show such a dependence of cis-trans selectivity. We proposed that these observations might come from oxotungsten-aluminum interaction.

L10 ANSWER 11 OF 21 WPIDS
AN 2001-648402 [74] WPIDS
DNN N2001-484491 DNC C2001-191334
TI **Multivalent ligands**, useful for creating scaffolds of biological species, including antigens, epitopes, **ligand** binding groups, cell receptors and macromolecules.
DC B04 B05 S03
IN GESTWICKI, J E; KIESSLING, L L; STRONG, L E
PA (WISC) WISCONSIN ALUMNI RES FOUND
CYC 95
PI WO 2001071309 A2 20010927 (200174)* EN 95
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001081499 A 20011003 (200210)
US 2003125262 A1 20030703 (200345)
EP 1334118 A2 20030813 (200355) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
JP 2004512258 W 20040422 (200428) 163
ADT WO 2001071309 A2 WO 2001-US9174 20010321; AU 2001081499 A AU 2001-81499 20010321; US 2003125262 A1 Provisional US 2000-191014P 20000321, US 2001-815296 20010321; EP 1334118 A2 EP 2001-959934 20010321, WO 2001-US9174 20010321; JP 2004512258 W JP 2001-569247 20010321, WO 2001-US9174 20010321
FDT AU 2001081499 A Based on WO 2001071309; EP 1334118 A2 Based on WO 2001071309; JP 2004512258 W Based on WO 2001071309
PRAI US 2000-191014P 20000321; US 2001-815296 20010321
AN 2001-648402 [74] WPIDS
AB WO 200171309 A UPAB: 20011217
NOVELTY - A method for inducing a biological response in a biological system comprising receptors is new.
DETAILED DESCRIPTION - A method for inducing a biological response in a biological system comprising receptors comprises introduction of a **multivalent ligand** comprising signal recognition elements recognized by the receptors and bonded to a molecular scaffold.
INDEPENDENT CLAIMS are included for:
(i) a method for treating a bacterial infection comprising administration of a **multivalent ligand** comprising signal recognition elements that are chemoattractant signals **covalently** bonded to a molecular scaffold;
(ii) a composition for treating a bacterial infection comprising a

ligand effective for inhibiting the chemotaxis response in the bacterium;
(iii) a method for modulating the chemotaxis response of a eukaryotic cell comprising administration of a **multivalent ligand** comprising elements that are chemoattractants of the eukaryotic cell;
(iv) a method for treating an infection of a eukaryotic pathogen or parasite comprising administration of a **multivalent ligand**;
(v) a composition for treating an infection of a eukaryotic pathogen or parasite;
(vi) a **multivalent ligand** of structure (I);
(vii) a complex of (I) bound to proteins;
(viii) a method for enhancing aggregation of biological particles comprising contacting the particles with a **multivalent ligand** comprising recognition elements which induce aggregation; and
(ix) a method for inducing apoptosis in a cell comprising administration of a **multivalent ligand** comprising signal recognition elements which bind to the cell and induce apoptosis.
(I)
n = greater than 1;
Y' = O, S, NR8 or CH2;
R8 = H or organic group;
R1, R2 = H, organic group, signal recognition element (-L1-SRE), a recognition element (-L2-RE) or a functional element (-L3-FE) provided that at least one is -L1-SRE;
L1, L2, L3 = linker group; and
R4, R5, R6, R7 = H, organic group or end group.
USE - The **multivalent ligands** are useful for binding to any biological particle or molecules and for targeting cell or viruses. The **ligands** are useful for creating scaffolds of biological species, including antigens, epitopes, **ligand** binding groups, cell receptors and macromolecules.
Dwg.0/12

L10 ANSWER 12 OF 21 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:101280 BIOSIS
DN PREV200300101280
TI The chemistry and biology of multivalent saccharide displays.
AU Mann, David A. [Reprint Author]; Kiessling, Laura L. [Reprint Author]
CS University of Wisconsin-Madison, Madison, WI, USA
SO Wang, Peng George [Editor, Reprint Author]; Bertozzi, Carolyn R. [Editor]. (2001) pp. 221-275. Glycochemistry: Principles, synthesis, and applications. print.
Publisher: Marcel Dekker AG, Hutgasse 4, CH-4001, Postfach 812, Basel, Switzerland; Marcel Dekker Inc., 270 Madison Avenue, New York, NY, 10016, USA.
ISBN: 0-8247-0538-6 (cloth).
DT Book; (Book Chapter)
LA English
ED Entered STN: 19 Feb 2003
Last Updated on STN: 4 Apr 2003

L10 ANSWER 13 OF 21 MEDLINE on STN DUPLICATE 3
AN 2001404374 MEDLINE
DN PubMed ID: 11456698
TI Inhibition of cell adhesion to fibronectin by oligopeptide-substituted polynorbornenes.
AU Maynard H D; Okada S Y; Grubbs R H
CS Arnold and Mabel Beckman Laboratories of Chemical Synthesis, Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, California 91125, USA.
SO Journal of the American Chemical Society, (2001 Feb 21) 123 (7) 1275-9.
Journal code: 7503056. ISSN: 0002-7863.
CY United States

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200109
ED Entered STN: 20010917
Last Updated on STN: 20010917
Entered Medline: 20010913
AB Polynorbornenes substituted with two different peptide sequences from the RGD-containing integrin cell-binding domain of fibronectin are potent inhibitors of human foreskin fibroblast cell adhesion to fibronectin-coated surfaces. Ring-opening metathesis polymerization (**ROMP**) using Ru==CHPh(Cl)(2)(PCy(3))(DHIMes) (1) as an initiator produced polymers substituted with GRGDS and PHSRN peptide sequences. The inhibitory activity was quantified for these polymers and compared to the free peptides and GRGES-containing controls. A homopolymer substituted with GRGDS peptides was significantly more active than the free GRGDS peptide (IC(50) of 0.18 +/- 0.03 and 1.33 +/- 0.20 mM respectively), and the copolymer containing both GRGDS and PHSRN is the most potent inhibitor (IC(50) of 0.04 +/- 0.01 mM). These results demonstrate that significant enhancements of observed biological activity can be obtained from polymeric materials containing more than one type of **multivalent ligand** and that **ROMP** is a useful method to synthesize such well-defined copolymers.

L10 ANSWER 14 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-168291 [17] WPIDS
DNC C2001-050161
TI Preparing telechelic polymer, useful in crosslinked plastics synthesis or as ligands for cell surface receptors, comprises polymerizing monomer in presence of ruthenium or osmium carbene catalyst followed by reaction with capping agent.
DC A17 A96 B04 D16 E19
IN KIESSLING, L L; STRONG, L E; GORDON, E J
PA (WISC) WISCONSIN ALUMNI RES FOUND; (KIES-I) KIESSLING L L; (STRO-I) STRONG L E
CYC 94
PI WO 2000078821 A1 20001228 (200117)* EN 62
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000066484 A 20010109 (200122)
US 6271315 B1 20010807 (200147)
US 6291616 B1 20010918 (200157)
US 2002007016 A1 20020117 (200212)
EP 1200484 A1 20020502 (200236) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
KR 2002013585 A 20020220 (200257)
JP 2003502488 W 20030121 (200308) 98
US 6538072 B2 20030325 (200325)
MX 2001012960 A1 20020801 (200367)
ADT WO 2000078821 A1 WO 2000-US40245 20000619; AU 2000066484 A AU 2000-66484 20000619; US 6271315 B1 US 1999-335430 19990617; US 6291616 B1 US 1999-336121 19990617; US 2002007016 A1 Div ex US 1999-335430 19990617, US 2001-888098 20010622; EP 1200484 A1 EP 2000-954149 20000619, WO 2000-US40245 20000619; KR 2002013585 A KR 2001-716230 20011217; JP 2003502488 W WO 2000-US40245 20000619, JP 2001-505578 20000619; US 6538072 B2 Div ex US 1999-335430 19990617, US 2001-888098 20010622; MX 2001012960 A1 WO 2000-US40245 20000619, MX 2001-12960 20011214
FDT AU 2000066484 A Based on WO 2000078821; US 2002007016 A1 Div ex US 6271315; EP 1200484 A1 Based on WO 2000078821; JP 2003502488 W Based on WO

2000078821; US 6538072 B2 Div ex US 6271315; MX 2001012960 A1 Based on WO 2000078821

PRAI US 1999-336121 19990617; US 1999-335430 19990617; US 2001-888098 20010622

AN 2001-168291 [17] WPIDS

AB WO 200078821 A UPAB: 20020114

NOVELTY - Multivalent array is prepared by post-polymerization modification of a polymer backbone generated by a metal carbene-catalyzed ring opening metathesis polymerization (**ROMP**) system. The method comprises attaching desired pendant functional groups to preformed polymers prepared in the presence of ruthenium or osmium carbene catalyst(s).

DETAILED DESCRIPTION - Preparing a telechelic polymer comprises:

(i) polymerizing at least one monomer comprising at least one polymerizable group in the presence of at least one ruthenium or osmium carbene catalyst to form a polymer; and

(ii) combining the polymer with at least one capping agent to react the polymer with the capping agent, where either the carbene catalyst, the capping agent or both are functionalized, to give a terminally functionalized polymer.

INDEPENDENT CLAIMS are included for the following:

(1) a library comprising a plurality of multivalent arrays where each multivalent array is prepared as above;

(2) generating a library comprising a plurality of multivalent arrays comprising: (a) synthesizing each multivalent array as above; and (b) combining the multivalent array to generate a library;

(3) a functionalized capping agent (FA) of formula (I');

D = electron donating group;

R6 = an organic group that includes a latent reactive group selected from an azide, a nitro group, a disulfide, a hydrazine, a hydrazide, a hydroxylamine, an aldehyde, a ketone, an epoxide, a cyano group, an acetal, a ketal, a carbamate, a thiocyanate, an activated ester and an activated acid;

R7, R8 = H or an organic group;

(4) a functionalized carbene of formula (III);

M = Ru or Os;

X, X' = anionic ligand; or

X+X' = anionic bidentate ligand;

L, L' = neutral ligand; or

L+L' = bidentate neutral ligand;

R4 = inorganic group that includes a latent reactive group selected from an azide, an epoxide, a cyano group, an acetal, a ketal, a carbamate, a thiocyanate, an activated ester, an activated acid, a hydrazine and a hydrazone;

(5) solid-supported functionalized carbene of formula (V);

R' = H or an organic group;

LK = cleavable linker to a solid support;

(6) a method of preparing a multivalent array;

(7) polymer templates of formula (VII) and (VIII);

BB = backbone repeat unit which may be cyclic or acyclic, and may be the same or different in a random or block arrangement;

R1', R2' = H or an organic group, which may be connected such that they form a ring;

provided that at least one of R1' and R2' includes a protected amine or an activated ester;

R4'-R7' = H or organic group;

Z = H, halide, hydroxyl, thiol or amine;

n = average number of repeating monomer units;

(8) a kit comprising the polymer template (VIII) and instruction means for using functionalizing reagent to attach a pendant functional group to the polymer template;

(9) a library which comprises a plurality of multivalent arrays.

USE - For synthesizing multivalent arrays and combinatorial libraries of multivalent arrays such as functionalized polymers (including short

oligomers), libraries of oligomeric substances that differ in type and number of functional groups, terminal functionality and in length. The functionality may include those which allow for immobilization on a substrate, are capable of fluorescence allowing for the creation of a molecular probe that can be used to visualize a receptor-ligand interaction on a cell surface. For synthesizing multivalent arrays of biologically relevant binding epitopes. Multivalent arrays have applications in fields such as pharmaceuticals, medical devices, sensors and optical materials, especially in medical and biotechnology areas where the binding of cell surface receptors to particular epitopes of multivalent arrays can trigger a wide variety of biological responses. Multivalent arrays induce the release of a cell surface protein. Libraries of multivalent arrays are useful in screening and selection of multivalent arrays that exhibit a desired function, especially libraries for screening for various biological activities (e.g. cell surface binding, biological signal effects etc.). In protein-carbohydrate recognition processes, multivalent saccharide-substituted arrays can exhibit increased avidity, specificity, and unique inhibitory potencies under dynamic shear flow conditions. Due to their ability to span large distances, linear multivalent arrays of varying length and epitope density are particularly useful for probing structure-function relationships in biological systems. For producing random copolymers and block copolymers. Attached functional groups may provide a recognition element (i.e. binding site) for biological entity e.g. cell surface receptor or it may be generally unreactive so that the resultant polymers may be bioactive or biocompatible. Telechelic polymers are useful in the synthesis of crosslinked plastics.

ADVANTAGE - Unlike conventional ROMP methods that incorporate the desired pendant functional groups into the monomers followed by polymerization, the present methods attach the desired pendant functional groups to preformed polymers which provide better control and access to wider variety of materials than previous methods and give rise to materials with unique surfaces or ligands for a wide variety of natural and synthetic receptors. The present methods provide ability to control the number, type and position of pendant functional groups as well as selected functionality at the polymer ends. The method allows generation of block copolymers where the length of each block of monomers can be controlled. The present method of block copolymer formation allows formation of polymers with selected spacing between functional groups, allows synthesis of multivalent arrays of defined length, defined density of functional groups, defined distance between functional groups, defined combination of different functional groups (relative number and spacing), defined position of the same or different functional groups and defined groupings of functional groups. Further disadvantage of the conventional methods avoided by the present method include having to synthesize a new functionalized cyclic olefin monomer for each polymer class to be produced. The physical properties of each monomer e.g. its solubility, electron density and strain of the cyclic olefin result in different rates of initiation, propagation and non-productive termination of the reaction, and purification of the desired products can be complicated, which all hinder large-scale syntheses of multivalent arrays. In contrast, terminal attachment of functional groups to preformed polymer backbone generated by a metal carbene-catalyzed ROMP system facilitates purification, allowing its use in large-scale production. Preferred methods of the present process give relatively high yields, are convenient and/or efficient in the preparation of polymers of e.g. varying average lengths, varying epitope density and varying functionality.

Dwg.0/16

L10 ANSWER 15 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2000-666416 [65] WPIDS
DNC C2000-201989
TI New cationic complex ruthenium or osmium catalysts useful for metathesis of olefins.

DC A18 E11 E12
IN KYLLINGSTAD, V L; MUKERJEE, S L
PA (JAPG) ZEON CHEM LP; (JAPG) NIPPON ZEON KK
CYC 28
PI EP 1041078 A2 20001004 (200065)* EN 20
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
CA 2302652 A1 20001002 (200065) EN
JP 2000309597 A 20001107 (200106) 14
US 6225488 B1 20010501 (200126)
ADT EP 1041078 A2 EP 2000-106026 20000328; CA 2302652 A1 CA 2000-2302652 20000328; JP 2000309597 A JP 2000-95138 20000330; US 6225488 B1 US 1999-285250 19990402
PRAI US 1999-285250 19990402
AN 2000-666416 [65] WPIDS
AB EP 1041078 A UPAB: 20010515
NOVELTY - Cationic complexes of ruthenium or osmium catalysts are new.

DETAILED DESCRIPTION - A compound of formula (I), (II) or (III) is new.

M = ruthenium or osmium;

X1 and X2 = 3-20C hydrocarbon group having an allyl moiety as an end group bonded to M optionally substituted or its backbone by T;

T = group optionally substituted on its backbone with up to 3 substituents selected from 1-20C alkyl, 1-20C alkoxy and 6-12C aryl and further optionally having up to 3 functional groups selected from hydroxyl, nitro, halogen, thiol, thioether, ketone, aldehyde, ester, ether, amine, imine, amide, carboxylic acid, disulfide, carbonate, isocyanate, carbodiimide, carboalkoxy or carbamate;

X1+X2 = dimerized product of 4-10C alkene with an allyl moiety at each end bonded to M, the resulting group of alkene dimerization is T;

L1 and L11 = neutral electron donor ligand;

L2 = carbene group of formula =C=RR1 or =C=C-RR1;

R and R1 = H, 1-20C alkyl, 2-20C alkenyl, 2-20C alkynyl, 6-20C aryl, 1-20C carboxylate, 1-20C alkoxy, 2-20C alkenyloxy, 2-20C alkynyloxy, 6-20C aryloxy, 2-20C alkoxycarbonyl, 1-20C alkylthio, 1-20C alkylsulfonyl or 1-20C alkyl sulfinyl or optionally may have up to 3 substituents selected from 1-5C alkyl, halogen, 1-5C alkoxy and 6-10C aryl;

L3 = neutral electron donor ligand or halide;

A = counter anion weakly coordinated to M so that A is not bonded as a ligand to M;

n = 1 or 2;

provided that n = 1 when L3 = halide and n = 2 when L3 = neutral electron donor ligand;

L12 = solvent molecule capable of coordination to M;

L13 = 1-20C alkyl;

L- L = bidentate ligand coordinated to M through two atoms, selected from phosphorus, nitrogen or arsenic;

L14 = 1-20C alkyl, 3-20C carbene neutral electron donor ligand, solvent molecule capable of coordinating with M or halide;

n1 = 1 or 2; provided that n1 = 1 when L14 = halide and n1 = 2 when L14 = alkyl, carbene or solvent molecule.

An INDEPENDENT CLAIM is also included for initiating a metathesis reaction of an olefin, by conducting the reaction in the presence of (I), (II) or (III).

USE - For initiating metathesis reactions preferably (**ROMP**) of ring strained cyclo-olefin-monomers such as norbornene or endo-dicyclopentadiene (claimed), ring-closing metathesis (RCM) of dienes to form ring-closed products, depolymerization of unsaturated polymers, synthesis of telechelic polymers by reaction of a cyclic olefin with a functionalized olefin and for synthesis of cyclic olefins by self-metathesis of an acyclic olefin or cross-metathesis of two acyclic olefins.

ADVANTAGE - The complex catalysts are highly active in initiating the ring opening metathesis polymerization (**ROMP**) of cyclo-olefin

without the use of any co-catalyst such as diazo ethyl acetate. Even at a very low monomer to catalyst ratio such as 50,000:1 the conversion to carbene complex is extremely promising. The catalysts are stable in the presence of a variety of functional groups such as hydroxyl, thiol, ketone, aldehyde, isocyanate, amide etc. The catalysts may be synthesized using readily available starting materials. The complexes formed generally in a couple of days and the percent yield obtained in most cases is good to excellent.
Dwg.0/0

L10 ANSWER 16 OF 21 MEDLINE on STN DUPLICATE 4
AN 2000130934 MEDLINE
DN PubMed ID: 10662681
TI Synthesis of end-labeled **multivalent ligands** for exploring cell-surface-receptor-**ligand** interactions.
AU Gordon E J; Gestwicki J E; Strong L E; Kiessling L L
CS Departments of Chemistry and Biochemistry, University of Wisconsin-Madison, Madison, WI 53706, USA.
NC GM18750 (NIGMS)
GM55984 (NIGMS)
T32GM08349 (NIGMS)
SO Chemistry & biology, (2000 Jan) 7 (1) 9-16.
Journal code: 9500160. ISSN: 1074-5521.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000327
Last Updated on STN: 20000327
Entered Medline: 20000313
AB BACKGROUND: Ring-opening metathesis polymerization (**ROMP**) is a powerful synthetic method for generating unique materials. The functional group tolerance of ruthenium **ROMP** initiators allows the synthesis of a wide range of biologically active polymers. We generated **multivalent ligands** that inhibit cell surface L-selectin, a protein that mediates lymphocyte homing and leukocyte recruitment in inflammation. We hypothesized that these **ligands** function through specific, **multivalent** binding to L-selection. To examine this and to develop a general method for synthesizing multivalent materials with end-labels, we investigated functionalized enol ethers as capping agents in ruthenium-initiated **ROMP**. RESULTS: We synthesized a bifunctional molecule that introduces a unique end group by terminating ruthenium-initiated **ROMP** reactions. This agent contains an enol ether at one end and a masked carboxylic acid at the other. We conjugated a fluorescein derivative to an end-capped neoglycopolymer that had previously been shown to inhibit L-selection function. We used fluorescence microscopy to visualize neoglycopolymer binding to cells displaying L-selectin. Our results suggest that the neoglycopolymers bind specifically to cell surface L-selectin through multivalent interactions. CONCLUSIONS: Ruthenium-initiated **ROMP** can be used to generate biologically active, **multivalent ligands** terminated with a latent functional group. The functionalized polymers can be labeled with a variety of molecular tags, including fluorescent molecules, biotin, lipids or antibodies. The ability to conjugate reporter groups to **ROMP** polymers using this strategy has broad applications in the material and biological sciences.

L10 ANSWER 17 OF 21 EMBASE
on STN DUPLICATE 5
AN 1998369028 EMBASE
TI Probing low affinity and **multivalent** interactions with surface plasmon resonance: **Ligands** for concanavalin A.
AU Mann D.A.; Kanai M.; Maly D.J.; Kiessling L.L.

CS L.L. Kiessling, Department of Chemistry, University of Wisconsin, Madison, WI 53706, United States
SO Journal of the American Chemical Society, (21 Oct 1998) 120/41 (10575-10582).
ISSN: 0002-7863 CODEN: JACSAT
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English
AB The affinities of the carbohydrate-binding protein concanavalin A (Con A) for mono- and **multivalent ligands** were measured by surface plasmon resonance (SPR) detection. Assessing protein-carbohydrate affinities is typically difficult due to weak affinities observed and the complications that arise from the importance of **multivalency** in these interactions. We describe a convenient method to rapidly evaluate the inhibitory constants for a panel of different **ligands**, both **monovalent** and **multivalent**, for low- affinity receptors, such as the carbohydrate-binding protein Con A. A nonnatural, mannose-substituted glycolipid was synthesized, and self- assembled monolayers of varying carbohydrate density were generated. The synthetic surfaces bind Con A. Competition experiments that employed **monovalent ligands** in solution yielded K(i) values similar to equilibrium binding constants obtained in titration microcalorimetry experiments. In addition, this assay could be used to examine various polymeric **ligands** of defined lengths, generated by ring-opening metathesis polymerization (**ROMP**). This study demonstrates the utility of this method for rapidly screening **ligands** that engage in low affinity interactions with their target receptors. Our results emphasize that those molecules that can simultaneously occupy two or more saccharide binding sites within a lectin oligomer are effective inhibitors of protein-carbohydrate interactions.

L10 ANSWER 18 OF 21 EMBASE
on STN DUPLICATE 6
AN 1998140055 EMBASE
TI Dipyridyl amide-functionalized polymers prepared by ring-opening-metathesis polymerization (**ROMP**) for the selective extraction of mercury and palladium.
AU Sinner F.; Buchmeiser M.R.; Tessadri R.; Mupa M.; Wurst K.; Bonn G.K.
CS M.R. Buchmeiser, Inst. Analytische Chemie/Radiochemie, Universitat Innsbruck, Inrain 52 a, A-6020 Innsbruck, Austria.
michael.r.buchmeiser@uibk.ac.at
SO Journal of the American Chemical Society, (1 Apr 1998) 120/12 (2790-2797).
ISSN: 0002-7863 CODEN: JACSAT
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English
AB Ring-opening-metathesis polymerization (**ROMP**) was used for the preparation of a dipyridylcarbamide-functionalized polymer suitable for solid-phase extraction of metal ions from aqueous solutions. Resins were prepared by the copolymerization of the functional monomer. N,N-di-2-pyridyl- endo-norborn-2-ene-5-carboxamide (I) with 1,4,4a,5,8,8a-hexahydro-1,4,5,8- exo-endo-dimethanonaphthalene (II), using the welldefined Schrock catalyst Mo(N-2,6-i-Pr2C6H3)CHCMe2Ph(OCMe(CF3)2)2 (III). The polymerization proceeds in a living manner, allowing the stoichiometric buildup of polymers. NMR investigations proved the expected backbone structure of the resulting polymers, where the binding site of the monomer remains unaffected in course of the polymerization. The new materials were investigated in terms of their complexation behavior versus a large Variety of mono-, di-, tri-, and **tetravalent** metal ions employing UV-vis spectroscopy as well as AAS and ICP- OES techniques. The

polymer-bound dipyridylamide **ligand** showed excellent selectivity toward Hg2+ and Pd2+, allowing the selective extraction of both **divalent** metal ions over a broad range of concentrations from complex mixtures. Due to the stability of the resulting complexes, high loadings of the material with both metals were achieved. To elucidate the chemistry of complexation, X-ray structures of compound (I) as well as ESI-MS investigations of the complex of I with Pd2+ were performed. I crystallized in the monoclinic space group P21/c, and forms 1:1 complexes with Pd2+ under conditions identical to the SPE experiments.

L10 ANSWER 19 OF 21 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 7
AN 1997:433766 BIOSIS
DN PREV199799732969
TI Neoglycopolymer inhibitors of the selectins.
AU Manning, David D.; Strong, Laura E.; Hu, Xin; Beck, Pamela J.; Kiessling, Laura L. [Reprint author]
CS Dep. Chem., Univ. Wis.-Madison, Madison, WI 53706, USA
SO Tetrahedron, (1997) Vol. 53, No. 35, pp. 11937-11952.
CODEN: TETRAB. ISSN: 0040-4020.
DT Article
LA English
ED Entered STN: 8 Oct 1997
Last Updated on STN: 8 Oct 1997
AB The selectin class of proteins plays an important role in the inflammatory response. These proteins, which bind saccharide ligands, facilitate the recruitment of leukocytes to the inflamed endothelium. The ring-opening metathesis polymerization (**ROMP**) has been used to generate synthetic multidentate ligands, which display multiple copies of sulfated saccharide residues. By altering the structure of the appended saccharide residues, **multivalent ligands** that selectively target one member of the selectin family, Pselectin, were created. The biological activities of materials prepared from the same monomer unit varied, depending on the method of polymer preparation. This result suggests that polymers containing more repeat elements exhibit higher selectin inhibitory activities.

L10 ANSWER 20 OF 21 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 97:725481 SCISEARCH
GA The Genuine Article (R) Number: XX841
TI In situ catalyst systems for ring-opening metathesis polymerization
AU Kelsey D R (Reprint); Handlin D L; Narayana M; Scardino B M
CS SHELL DEV CO, WESTHOLLOW TECHNOL CTR, POB 1380, HOUSTON, TX 77251 (Reprint)
CYA USA
SO JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY, (OCT 1997) Vol. 35, No. 14, pp. 3027-3047.
Publisher: JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK, NY 10158-0012.
ISSN: 0887-624X.
DT General Review; Journal
FS PHYS
LA English
REC Reference Count: 156
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Several new in situ tungsten catalyst systems for ring-opening metathesis polymerizations (**ROMP**) by reaction injection molding (RIM) have been developed by adding BF3 promoter to binary catalyst systems, by using metal hydride cocatalysts, and by altering the **ligands** on the procatalyst metal center. BF3 etherates improved catalyst efficiency and reduced induction times for formation of active catalysts from reaction of aryloxytungsten complexes [e.g., (ArO)(y)WXx)] with organotin hydrides. Coordinatively unsaturated cationic intermediates, such as [(ArO)(y)WXx-1](+) BF3X-, are proposed to facilitate formation of the active catalysts. Tougher

poly(dicyclopentadiene) (polyDCPD) composites were produced using < 5 wt % of styrene-butadiene block copolymers due to formation of small ''shell-core'' rubber morphologies when BF3 promoter was added to the catalyst system. Nonalkylating metal hydrides besides R3SnH, including (PPh3)(2)CuBH4, (PPh3CuH)(6), and Cp2ZrClH, were shown to be cocatalysts. The optimum 2 : 1 stoichiometric ratio of organotin hydride cocatalyst to tungsten, revealed by BF3-promoted catalyst systems, and W-V EPR resonances (g approximate to 1.7) observed in the reaction of aryloxytungsten with organotin hydride are consistent with an overall reduction and reoxidation mechanism for formation of the active metathesis catalysts. Some tungsten complexes derived from 9-hydroxyffuorene, 2,2'-(and 4,4')-biphenols, and 1,4-hydroquinones were found to be very reactive procatalysts, even in the absence of cocatalyst in some cases. These procatalysts also were paramagnetic, characterized by unusual EPR spectra consistent with W-V (g = 1.6-1.9) and ''**ligand**-centered'' (g = 2.003) resonances. **Valence** tautomeric species, analogous to catecholate-semiquinonate complexes, are proposed. (C) 1997 John Wiley & Sons, Inc.

L10 ANSWER 21 OF 21 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1996-321822 [32] WPIDS
DNC C1996-102517
TI New polyglycomer cpds. having sulphated saccharide moieties - are used for topical treatment of inflammation.
DC A96 B04
IN KIESSLING, L L; MANNING, D D; MORTELL, K H
PA (WISC) WISCONSIN ALUMNI RES FOUND; (KIES-I) KIESSLING L L; (MANN-I) MANNING D D; (MORT-I) MORTELL K H
CYC 64
PI WO 9620236 A1 19960704 (199632)* EN 50
RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ UG
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TT UA UG US UZ VN
AU 9641315 A 19960719 (199647)
US 5587442 A 19961224 (199706) 12
ADT WO 9620236 A1 WO 1995-US13361 19951013; AU 9641315 A AU 1996-41315 19951013; US 5587442 A US 1994-363503 19941223
FDT AU 9641315 A Based on WO 9620236
PRAI US 1994-363503 19941223
AN 1996-321822 [32] WPIDS
AB WO 9620236 A UPAB: 19960819
Polyglycomer cpds. of formula (I) are new. L = a linker selected from O(CH2)m, NH(CH2)m, O(CH2)m-X and NH(CH2)mX; X = S or O; m = 2-10; R1, R2 = saccharide moieties; and n = 1 - 2000. Also claimed is a method of creating a polyglycomer by ring-opening metathesis polymerisation (**ROMP**), (1) attaching at least one saccharide gp. to 7-oxa-norbornene via a C-glycoside linkage; and (2) treating the prod. with ruthenium catalyst. The polyglycomer produced by this process is claimed per se.

Pref. R1, R2 are mono-, di-, tri or oligo-saccharides, ligands or hexoses. Especially they are not the same, and the saccharide moieties are sulphated. R1, R2 = fucose, mannose or glucose. L = OCH2CH2. 1000 < n < 2000 especially 500 < n < 1800; alternatively n < 20.

USE - (I) where the saccharide moieties are sulphated are used to treat inflammation, by topical application to the inflammed tissue. Also glucose-derivatised and mannose-derivatised polyglycomers act as potent inhibitors of concanavalin A induced cell agglutination.

ADVANTAGE - A **multivalent** carbohydrate polymer with means to control the size of the **multivalent ligand**, the density of the carbohydrate substits. and the size of the polymer, is provided.

Dwg.1/12
ABEQ US 5587442 A UPAB: 19970205

A polyglycomer of the formula (I)
wherein L is a linker selected from the group of -O-(CH2)m-, -NH-(CH2)m-, -O-(CH2)m-X-, and -NH-(CH2)m-X-, wherein X is S or O and m is 2-10,
wherein R1 and R2 are selected from the group consisting of monosaccharides, disaccharides, trisaccharides, and oligosaccharides, and
wherein n is between 1 and 2000.
Dwg.0/12

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	1.56	528.89

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 13:49:12 ON 31 MAY 2004